REMARKS

Claims 1-6, 8, 9 and 11-13 are pending in the present application. Claims 7 and 10 have been previously cancelled and claim 13 has been previously withdrawn from consideration. Claims 1 and 15 have been amended and claims 9 and 14 have been previously canceled. Claims 1 and 15 have been amended to provide proper antecedent basis. Reconsideration and allowance of the claims 1-6, 8, 11, 12 and 15 are respectfully requested in view of the above amendments and following remarks. No new matter has been added.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 29, 11, 12, 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Nagata et al. (U.S. Patent No. 6,624,857 B1, hereinafter "Nagata") in view of Kim (U.S. Patent No. 6,392,719, hereinafter " Kim"). The Examiner states that Nagata discloses all of the elements of the abovementioned claims except, *the inspection lines passing directly under the driving circuit*, which the Examiner further states is disclosed in Kim. However, the Examiner does not point out where such disclosure can be found in Kim. The Examiner concludes that it would have been obvious to one of ordinary skill at the time of the invention to combine the location of the inspection lines under the driving circuits of Kim and Nagata in order to decrease the cell size and eliminate the step of scribing the substrate after testing.

However, on the contrary with respect to Kim, it is respectfully submitted that a feature of the present application includes the position of pads for a VI test. In particular, ***the test pad is formed under the place where the flexible film is formed***, as recited in amended independent claims 1 and 15. In addition, this feature makes the formation of pads and signal lines on the substrate that more efficient. Therefore, even if the prior art of record were combined, the present invention as claimed would not result by a person of ordinary skill in the pertinent art.

In Kim, the shorting bar (6, 7, 8) and pads are cut out from the substrate by the scribing step after the VI test. In contrast, in the present application, the shorting bar and

pads remain on the substrate **after** the VI test. In the present application, this is possible because of the position of the pads.

In addition, Kim does not disclose, teach or suggest that **the inspection line and the second display signal lines are *electrically separated***, as recited in independent claims 1 and 15. Kim discloses that the shorting bars (6, 7, 8) and pads are electrically connected to the data lines (2a, 2b, 2c) in FIGS. 3-5.

Moreover, Kim at most discloses with respect to FIG. 5, that auxiliary test pads 11 are formed between a bundle of pads 10 formed in the data lines to apply signals to the shorting bars when testing the TFT-LCD array so that the auxiliary test pads 11 are connected to the first, second and third shorting bars 6, 7, and 8, respectively. Thus, it is possible to test shorting out of the signal lines of the gate lines or the data lines even if the shorting bars are shorted out. (Col. 4, lines 30-37.) There is no disclosure in Kim of passing inspection lines under the "drivers" as alleged by the Examiner. Accordingly, it is respectfully submitted that there is no disclosure in Kim of "passing inspection lines under the drivers" and that it would have been obvious to do so in order to decrease the cell size and eliminate the step of scribing the substrate after testing, as alleged by the Examiner on page 3 of the Detailed Action. There is certainly no suggestion or motivation in Kim to eliminate scribing, since the data lines are connected to the shorting bars and pads. Therefore, Nagata would not be motivated to use the inspection lines and pads of Kim, since that would require scribing the substrate after testing.

With regards to the present Detailed Action relative to the previous Detailed Action, the Examiner notes the addition of a new added paragraph in Response to Arguments section on page 4 of the present Detailed Action. In particular, on page 3 of the present Detailed Action, the Examiner points to column 25, last full paragraph [of Nagata] and alleges that "[t]he flexible substrate for driving are inherently attached to the pads a the pads supply the necessary connection." However, on the contrary the last full paragraph of column 25 in Nagata merely disclose that **"[t]hereafter**, with regard to the liquid crystal display panel judged as a non-defective unit by performing the inspection, a required number of gate drivers 20b for driving the scanning lines 2 and a required number of source drivers 20a for driving the data lines 3 are packaged, and finally a FPC

(Flexible Printed Circuit) (not shown) for supplying the signals required for driving these drivers 20 is packaged on the end of the insulating substrate 7 constituting the active matrix substrate 16, thereby completing the active-matrix-type liquid crystal display device." (Emphasis added). In addition, FIG. 1 of Nagata relied upon by the Examiner discloses pads p and q for connecting the gate drivers 20b and source drivers 20a, respectively, for connection with the FPC discussed above being separated/different than the teat pads 32a-32b and 39a-39b relied upon by the Examiner disposed in corners of the insulating substrate 7 different from a corner having pads p and q for connection with the FPC.

Thus, Nagata contrary to the allegation by the Examiner, does not teach or suggest, and in fact teaches away from, does not teach or suggest the test pad is disposed between the driver and the one edge of the TFT array panel, and ***the test pad is formed under the place where the flexible film is formed,*** as in independent claims 1 and 15.

Therefore, independent claims 1 and 15, including claims depending therefrom, i.e., claims 2- 6, 8, 9, 11, 12 and 14, define over Nagata in view of Kim.

First it is respectfully noted that claims 3-6 and 8 depend from independent claim 1, which is submitted as being allowable for defining over Nagata as discussed above. Second, it is respectfully submitted that use of *a plurality of straight connecting lines interconnecting chip drivers wherein the test pad is closer to an edge of the liquid crystal panel than to the connecting lines and a plurality of flexible printed circuit films attached to the liquid crystal panel, wherein the external devices are the flexible printed circuit films* allegedly taught in Kawasaki, or any other disclosure of Kawasaki, does not cure the deficiencies noted above with respect to Nagata.

In addition, FIG. 8 of Kawasaki relied upon by the Examiner, the pads are located between the driver ICs (3), thus Kawasaki has the problem of interference between the signal lines and the inspection line and pads. However, the present application has the purpose of not interfering between the signal lines and the inspection line and pads. Kawasaki does not teach or suggest the test pad is disposed between the driver and the

one edge of the TFT array panel, and ***the test pad is formed under the place where the flexible film is formed,*** as in independent claim 1, from which claims 3-6 and 8 depend.

Moreover, regarding the rejection of claim 8, the Examiner states that "the test pad is closer to an edge of the liquid crystal panel than to the connecting lines" on page 3 of the Detailed Action is disclosed in Kawasaki. However, referring to Fig. 8 of Kawasaki, the comments of the Examiner are not correct, as the pads are located between the driver ICs (3), as discussed above.

Accordingly, it is respectfully requested that the rejection to claims 3-6 and 8 under § 103(a) be withdrawn.

Claims 3-6 and 8 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Nagata in view of Kawasaki (U.S. Patent No. 6,424,400, hereinafter "Kawasaki"), as applied to claims 1-2 and 11-12, and further in view of Kim. The Examiner states that Nagata discloses all of the elements of the abovementioned claims except, *a plurality of straight connecting lines interconnecting chip drivers wherein the test pad is closer to an edge of the liquid crystal panel than to the connecting liens and a plurality of flexible printed circuit films attached to the liquid crystal panel, wherein the external devices are the flexible printed circuit films*, which the Examiner further states is disclosed primarily in column 2 of Kawasaki.

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signal lines and the inspection line and pads. However, the present application has the purpose of not interfering between the signal lines and the inspection line and pads. Kawasaki does not teach or suggest the test pad is disposed between the driver and the one edge of the TFT array panel, and ***the test pad is formed under the place where the flexible film is formed*** as in amended independent claim 1, from which claims 3-6 and 8 depend.

Moreover, regarding the rejection of claim 8, the Examiner states that "the test pad is closer to an edge of the liquid crystal panel than to the connecting lines" on page 3 of the Detailed Action is disclosed in Kawasaki. However, referring to Fig. 8 of Kawasaki, the comments of the Examiner are not correct, as the pads are located between the driver ICs (3), as discussed above.

Accordingly, it is respectfully requested that the rejection to claims 3-6 and 8 under § 103(a) be withdrawn.

Conclusion

If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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